

# Abstract

Prostaglandins Leukot Essent Fatty Acids. 2010 Sep;83(3):131-6.

## **Polyunsaturated fatty acids deficits are associated with psychotic state and negative symptoms in patients with schizophrenia.**

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**OBJECTIVE:** The study was aimed to examine membrane polyunsaturated fatty acids (PUFAs) profile in patients with schizophrenia (SZ) before and after antipsychotic medication and test their association with psychopathology.

**METHODS:** Erythrocyte membrane fatty acids were analysed by gas chromatography in 36 drug-free patients with SZ and 36 controls. Psychometric evaluation and blood sampling were achieved at baseline and after 3 months of antipsychotic treatment.

**RESULTS:** At enrollment, levels of total PUFAs and arachidonic (AA) and docosahexaenoic (DHA) acids were significantly lower, but omega6/omega3 PUFAs ratio was higher in patients. AA and DHA were negatively related to the Andreason's scale for assessment of negative symptoms (SANS) score. DHA was inversely related to "alogia", "anhedonia", "avolition", and "blunted affect" subitems of SANS. After 3 months under typical antipsychotic drugs, fatty acid profile turned into comparable to controls in parallel with psychopathology improvement.

**CONCLUSIONS:** Data indicate that PUFAs deficits are associated with psychotic state and negative symptoms of SZ.

PMID: 20667702

